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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MORRISON ULMAN			MALLARI, PATRICIA C	
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3736

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,492

Applicant(s)

BANET ET AL.

Examiner

Patricia C. Mallari

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/24/04</u> | 6) <input type="checkbox"/> Other: _____ |

Specification

The use of the trademark ZIGBEE® has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

Claims 1, 20, and 24 are objected to because of the following informalities:

On line 9 of claim 1, "transceiver" should be replaced with "transmitter".

On line 11 of claim 20, "transceiver" should be replaced with "transmitter".

On line 1 of claim 24, "short-range" should be deleted.

On line 2 of claim 24, "if" should be replaced with "is".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 7 and 20-24 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 7 and 20 each recite "a finger-mounted component". Claim 19 recites, "a finger-mounted module" and "a wrist-mounted module". Claims 21-23 each recite "the finger-mounted module". The human

body, or finger, is non-statutory subject matter and cannot positively be claimed. To overcome this rejection, for example, "finger-mounted component" should be replaced with "component adapted to be mounted on a finger of the user".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 17, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5, 17, and 24 contains the trademark/trade name "BLUETOOTH" and "Zigbee". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe telecommunication services and wireless communication services, respectively, and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,629,930 to Palma et al. in view of US Patent No. 6,443,906 to Ting et al. Palma teaches a device for monitoring a user's blood pressure. The device comprises a motion sensor for monitoring localized motion of the user, a vital-sign monitor for monitoring the blood pressure of the user, a microprocessor for receiving blood pressure information and motion information and distinguishing between blood pressure information received during localized motion of the user and localized rest of the user (figs. 3 & 5; col. 1, lines 39-47; col. 2, lines 6-18; col. 2, line 66-col. 3, line 19; col. 3, lines 31-67; col. 4, line 41-col. 5, line 9; col. 5, line 52-col. 6, line 5 of Palma). Palma teaches communicating the stored results to a computer, but fails to describe such communication in detail.

However, Ting teaches a wrist mounted device that acquires and processes physiological data from a user, wherein the device may include a wireless transceiver to connect the device to a personal computer to download data or a printer to print data (col. 9, lines 25-44 of Ting). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the communication means of Ting as that of

Palma, since Palma teaches transmitting data to an external computer, and Ting teaches an appropriate means of such data transmission.

Regarding claims 3 and 4, the motion sensor is a software algorithm that analyzes information from the vital-sign monitor to determine motion (col. 4, line 65-col. 6, line 9; col. 5, line 52-col. 6, line 4 of Palma). With further regard to claim 4, because the algorithm is disclosed as "fuzzy logic algorithms" and implemented within a microcontroller or processor, the algorithm must inherently be compiled computer code.

Regarding claim 5, the wireless transmitter is a short-range wireless transmitter operating on a wireless protocol based on BLUETOOTH® (col. 9, line 43 of Ting).

Regarding claim 11, an analog to digital converter is in communication with the motion sensor, vital sign monitor and microprocessor (fig. 5 of Palma).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palma in view of Ting, as applied to claims 1, 3-5, and 11 above, and further in view of US Patent No. 4,338,950 to Barlow, Jr. et al. Palma, as modified, is silent as to the details of the motion sensor. However, Barlow, Jr. teaches using an accelerometer as a motion sensor in a physiological monitoring device (figs. 2 & 3; col. 3, lines 65-col. 4, line 3 of Barlow, Jr.) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use an accelerometer as the motion sensor of Palma, as modified by Ting, since the combined reference teach using a motion sensor, and Barlow, Jr. discloses an accelerometer as an appropriate such motion sensor.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palma in view of Ting, as applied to claims 1, 3-5 and 11 above, and further in view of Ting and in view of US Patent No. 4,338,950 to Barlow, Jr. Palma, as modified, describes the blood pressure monitoring device as Holter system but fails to address its housing. However, Ting further teaches a blood pressure sensor wherein the microprocessor and wireless transmitter are housed in a bracelet (fig. 5 of Ting). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine Ting with the device of Palma, as modified, since Palma teaches a Holter system, wherein a Holter system is portable, and Ting teaches an appropriate housing for a portable blood pressure measuring device. Palma, as modified, teaches the motion sensor being placed on the chest. However, Barlow, Jr. et al. teaches a physiological monitoring device which accounts for movement of a user wherein the movement is determined by using a motion sensor 22 housed in a bracelet 12, the bracelet 12 also housing the microprocessing units of the device (figs. 1 & 2; col. 3, line 44-col. 4, line 46 of Barlow, Jr.) Therefore, it would have been obvious to use the construction of the motion sensor and bracelet of Barlow, Jr. in the device of Palma, as modified by Ting, as it would merely be the substitution of one known means of detecting movement for another.

As to the limitation "finger-mounted component" of claim 7, the applicants should note that this merely intended use language which cannot be relied upon to define over Palma, as modified by Ting and Barlow, Jr. since the combined references teach all of the claimed limitations and their recited relationships. The housing of the vital sign

monitor of the combined references is certainly capable of being mounted or placed on the finger.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palma in view of Ting, as applied to claims 1, 3-5 and 11, above, and further in view of US Patent No. 6,616,613 to Goodman et al. Palma, as modified, teaches a blood pressure cuff for determining the blood pressure. However, Goodman teaches a physiological monitoring device comprising a light source and photodetector, wherein the device may be used to determine blood pressure (abstract; col. 9, line 57-col. 10, line 7; col.13, lines 3-25; col. 32, lines 59-67 of Goodman). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the device of Goodman in place of the blood pressure cuff of Palma, as modified, as it would merely be the substitution of one known means for measuring blood pressure for another.

Regarding claim 9, the optical module is in communication with a pulse-oximetry circuit (col. 32, lines 22-59 of Goodman).

Regarding claim 10, the blood pressure information is a time-dependent optical waveform (abstract; col. 9, line 57-col. 10, line 7; col. 13, lines 3-25; col. 32, lines 59-67 of Goodman).

Claim 12-14 and 17 are rejected under 35 U.S. C. 103(a) as being unpatentable over US Patent No. 6,893,402 to Freund et al. in view of US Patent No. 6,443,906 to Ting et al. Freund teaches a method of monitoring a user's blood pressure wherein it is

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first determined if the user's hand is at rest or in motion. If the hand is determined to be at rest, a vital signs monitor is signaled to generate blood pressure information, and the blood pressure information is sent to a microprocessor for processing to generate a blood pressure signal for the user (fig. 5; col. 4, line 41-col. 5, line 11; col. 7, lines 5-61 of Freund). Freund lacks transmitting the blood pressure signal wirelessly to a computer or handheld device. However, Ting teaches a blood pressure measuring device wherein stored blood pressure data is wirelessly transmitted to a computer for trend analysis (col. 9, lines 25-44 of Ting). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the method of Ting with that of Freund in order to be able to see the trend and determine the danger-point of the change in blood pressure during a predetermined period of time (col. 9, lines 25-29 of Ting).

Regarding claim 13, determining if a user's hand is at rest comprises monitoring a signal from a motion sensor (col. 7, lines 5-41 of Freund).

Regarding claim 14, the motion sensor is an accelerometer that is in communication with the microprocessor (col. 4, line 59-col. 5, line 11 of Freund).

Regarding claim 17, the blood pressure signal is wirelessly transmitted using a radio-frequency transmitter operating a wireless protocol based on BLUETOOTH® (col. 9, line 43 of Ting).

Claims 15 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freund in view of Ting, as applied to claims 12-14 and 17 above, and further in view of

US Patent No. 5,342,5404 to Swedlow et al. Freund, as modified, teaches the accelerometer being a pendulum rather than a piezoelectric device or mercury switch. However, Swedlow teaches a physiological monitoring device comprising a motion sensor, wherein either an accelerometer, a piezoelectric device, or a software algorithm that analyzes information from the physiological or vital signs monitoring device is used as the motion sensor (col. 7, line 3-col. 8, line 2 of Swedlow). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a piezoelectric device or software algorithm in place of the accelerometer in the method of Freund, as modified, since Swedlow teaches the different types of motion sensors to be functionally equivalent.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Freund in view of Ting, as applied to claims 12-14 and 17 above, and further in view of US Patent No. 6,616,613 to Goodman. Freund, as modified, teaches using a blood pressure cuff to determine the blood pressure measurement. However, Goodman teaches a means for determining blood pressure comprising a light source and photodetector, wherein the acquired blood pressure signal is also indicative of pulse oximetry (abstract; col. 9, line 57-col. 10, line 7; col.13, lines 3-25; col. 32, lines 22-67 of Goodman). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the blood pressure measuring device of Goodman as the vital sign monitor of Freund, as modified by Ting, since it would merely be the substitution of one known means for measuring blood pressure for another.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Palma in view of Ting, as applied to claims 1, 3-5, and 11, above, and further in view of US Patent No. 6,616,613 to Goodman. Palma, as modified, lacks a handheld device operating on a network comprising a wireless transceiver. However, Goodman teaches a blood pressure monitoring device wherein the blood pressure monitoring device is connected to a handheld device (PDA) comprising a wireless transceiver that operates on a network for collection of blood pressure data (col. 14, lines 27-42 of Goodman). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a PDA for long term data collection in place of or as the computer of Palma, as modified by Ting, since Palma teaches downloading blood pressure information to a computer, and Goodman teaches a PDA or handheld device as an appropriate such computer.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,338,950 to Barlow, Jr. et al. in view of US Patent No. 6,443,906 to Ting et al. Barlow, Jr. teaches a device for monitoring a user's heart rate, the device comprising a finger-mounted module 13 and a wrist mounted module 12, 15. The finger-mounted module 13 comprises a monitor 21 for monitoring the heart rate of a user. The wrist-mounted module 12, 15 comprises a motion sensor 22 for monitoring localized motion of the user, and a microprocessor 24, 25 for receiving heart rate information and motion information and distinguishing between heart rate information

received during localized motion and during localized rest. An electrical wire 14 is a means for communicating from the finger-mounted module 13 to the wrist-mounted module 12, 15 (figs. 1, 2, 4; col. 3, line 44-col. 4, line 43; col. 5, line 47-col. 6, line 63 of Barlow, Jr.) Barlow, Jr. lacks a wireless transceiver for transmitting heart rate information from the microprocessor.

However, Ting teaches a wrist mounted device that acquires and processes physiological data from a user, wherein the device may include a wireless transceiver to connect the device to a personal computer to download data or a printer to print data wherein such collection of data is helpful in determining trends in the data (col. 9, lines 25-44 of Ting). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine Ting with Barlow, Jr. in order to enable long term analysis of collected physiological data for determining trends.

Regarding claim 22, the motion sensor is an accelerometer (col. 3, line 65-col. 4, line 3 of Barlow, Jr.)

Regarding claim 24, the short-range wireless transmitter is a radio-frequency transmitter operating a wireless protocol based on BLUETOOTH® (col. 9, line 43 of Ting).

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barlow, Jr. in view of Ting, as applied to claims 20, 22, and 24 above, and further in view of US Patent No. 5,941,837 to Amano et al. Barlow, Jr. teaches the pulse wave sensor as being a piezoelectric sensor rather than a light source and a photodetector. However,

Amano discloses a finger-mounted module having a pulse wave sensor for determining a heart rate of a user, wherein the pulse wave sensor comprises a light source and a photodetector (col. 16, lines 17-28 of Amano). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the light source and photodetector in place of the piezoelectric sensor in the device of Barlow, Jr., as modified by Ting, as it would merely be the substitution of one known pulse wave or heart rate sensor for another.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barlow, Jr. in view of Ting, as applied to claims 20, 22, and 24 above, and further in view of US Patent No. 5,368,026 to Swedlow. Barlow, as modified, teaches using an accelerometer as the motion sensor rather than a software algorithm that analyzes measured physiological information to determine motion. However, Swedlow teaches a physiological monitoring device having a motion sensor, wherein the motion sensor comprises either an accelerometer or software algorithm that analyzes acquired physiological information to determine motion (col. 7, line 3-col. 8, line 2 of Swedlow). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the software algorithm in place of the accelerometer in the device of Barlow, Jr. as modified by Ting, since Swedlow teaches the different types of motion sensors to be functionally equivalent.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia C. Mallari whose telephone number is (571) 272-4729. The examiner can normally be reached on Monday-Friday 10:00 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patricia Mallari
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